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Scott Walker, Governor Dave Ross, Secretary

# Plumbing FAQs

#### **State Statutes**

# 1. **145.01.10** - 9/25/98

**Is a plumbing license required to pre-fab plumbing?** Yes, with one exception. When a plumbing system has received product approval, the piping system may be pre-fabbed by assembly workers who are not licensed individuals. Otherwise, a license is required to construct a plumbing system.

# 2. **145.01.10 - 11/24/00**

Are water lines to soda dispensers considered plumbing? Yes, if the line carries drinking water, it's considered plumbing.

#### 3. **145.01.10 - 11/24/00**

Is a license required to install pipe liners? No. Pipe liners are considered a repair.

#### 4. 145.02.2 - 6/1/06

May a city require installation of an RP valve at the water service point of entry to the building? Only in sewage treatment facilities, marinas, wharves, or docks, as listed in SPS 382.41(3)(c).

# 5. **145.02.2 - 12/1/00**

Can a sanitary district have more stringent requirements than the code? Yes, in some instances. There is specific statutory authority in 200.11(3) of the statutes that allows a commissioner of a sanitary district to require preliminary treatment prior to discharging into the sanitary district's system. This is not the plumbing inspector or sewage treatment plant operator. The department will require documentation that the action will provide additional treatment over the plumbing code minimums.

# 6. **145.06 - 6/1/06**

What part of a dialysis system is considered plumbing and who can install the system? The entire dialysis system is considered to be part of the plumbing within a health care facility. A fully-licensed plumber (apprentice, JP or MP) may install the entire system. A restricted-appliance plumber may install the plumbing from an existing pipe and through the last water treatment device. A fully-licensed plumber must install the piping from the last treatment device to the dialysis stations.

# 7. **145.06 - 7/25/05**

May a homeowner install plumbing in a portion of their home intended to be used by the public? For example, if a shampoo sink or public restroom is to be installed for an in-home beauty salon? No, the homeowner may only install plumbing in a one-family dwelling. The portion of the building in this example is public and a licensed individual would be required.

#### 8. **145.06 - 3/13/98**

**Is an MP required to own a business?** A master plumber may work for another and be in charge of plumbing installations. It is not required that the master own a share of the business. A plumbing business needs to have a Building Contractor Registration.

#### 9. **145.06 - 7/12/00**

Who is the "responsible master"? The responsible master is any master that agrees to be responsible for the installation of plumbing. There is no distance restriction on the master from the installation.

# 10. **145.07 - 6/11/01**

Does a degree in engineering technology qualify someone to take the MP exam? No. The statutes require that a degree in "engineering" is necessary to write the MP exam. This degree must include courses related to plumbing, see SPS 305.91(3), or be a degree in civil engineering or mechanical engineering.

#### 11. **145.11 - 5/10/07**

What advertising requires the master plumber license number? The law says the MP number must be on items that are printed material designed for public distribution.

### What meets this definition?

Business cards - yes.

One business card on the wall of the plumbing shop and not distributed, no.

Pencils/pens with advertisement - yes, unless the pencils are not meant for public distribution.

Yellow page ad - yes.

Business page listing - No, the single or double-line phone book entry is a point for information transfer, not advertising.

Paint on plumbing truck - No, it is not printed material and not publicly distributed.

Billboard off the business property, Yes.

Business signs - No, these signs are informational for customers to find the shop.

#### 12. **145.14 - 5/10/07**

May a Master Plumber - Restricted Service install exterior grease interceptors? May they submit the plans for those projects? Yes, a MPRS may install an exterior grease interceptor and they may also sign the plans for projects where they will be the responsible master.

#### 13. **145.14 - 2/6/07**

When is a water supply system considered to be existing, so that a restricted appliance could install a device or appliance? An existing water supply system exists when a fully-licensed plumber (or occupant of a single-family residence) has installed the piping from the meter or control valve of a pressure tank to the point past where the water treatment device is to be installed.

#### **Administrative Code**

# 14. SPS 305.92.3 - 5/15/01

Can a journeyman write a restricted master exam? Yes, if the 1000-hour requirement is met. See the <u>attached</u> petition report.

#### 15. **SPS 305.94.3 - 3/18/98**

Is there a time limit to get the 1000 hours work for JPRA exam? Yes, the 1000 hours of work required to

write the JPRA exam must be completed during a continuous year.

### 16. SPS 381.01(38) - 5/26/98

The plumbing code definition of one building? Two buildings become one when they touch or share a roofline. Individual units separated by a "division wall" and having individual sewers or water services can become separate buildings. For more information, see the description attached.

# 17. SPS 381.01(116) - 08/05/2011

Some buildings contain multiple occupancies (i.e., under one roof there is a shoe store, grocery store and dental office). A dental office is defined as a health care and related facility as specified in SPS 381.01(116). If one of the occupied spaces is a dental office, is the whole building considered a health care and related facility? No, the whole building would not be considered a health care and related facility. Only the occupied space which contains the dental office would fall under the definition as stated in SPS 381.01(116).

#### 18. SPS 381.01(116) - 08/05/2011

When an individual receives dialysis treatment in an occupied space within a public building, is that occupied space considered a "health care and related facility" as defined in SPS 381.01(116)? Yes, that occupied space within the public building where the patient is receiving dialysis treatment would be considered a health care and related facility. The definition of health care and related facility includes "end stage renal facility." Dialysis treatment is considered end stage renal.

# 19. SPS 381.01(176) - 11/24/04

What is the definition of "process piping?" Process piping is a system that conveys process water. Process water is potable water that has been altered or modified by the addition of a product, chemical or ingredient, such that it has been degraded to where it would cause a nuisance, be aesthetically objectionable, or could cause minor damage. Drinking the water would not constitute a health hazard. For example, water is potable to the point where the first ingredient is added to the water for brewing beer. From that point on, the system is process piping.

# 20. SPS 381.01(176) - 6/6/00

When is a depression in the floor considered plumbing? When a grated trench is installed in a building, it is considered a plumbing fixture and must be properly drained and disposed of as in SPS 382.10(8). The only exception to this is when the depression or pit is a containment device for hazardous waste.

#### 21. SPS 382.01(176) - 3/1/05

When is the piping within a kiosk not considered to be under the authority of SPS 382? A kiosk that is mobile (one that has wheels) would not be considered a building and the piping inside would not be required to compy with the plumbing code.

#### 22. SPS 381.01(179) - 2/6/07

**Is there a definition for a storm plumbing system?** No. Howeve,r storm plumbing system means piping, appliances, and devices that convey, hold infiltrate, or treat storm water from building runoff. This includes all piping connected to piping conveying runoff from buildings. The portion of the storm plumbing system under the authority of the Wisconsin Uniform Plumbing Code is that portion

conveying storm water to the municipal system or discharging to grade.

#### 23. **SPS 382.20 - 08/05/2011**

For plan review purposes, when determining the total number of plumbing fixtures a project involves, are "overflow" roof drains included in the count? No, "overflow" roof drains are not included when determining the total number of plumbing fixtures for a specific project.

# 24. **SPS 382.20 - 6/1/06**

Must plans be submitted for plumbing review for the piping receiving the discharge from a detention basin draining one acre or more? When on private property, the piping is considered plumbing and plan review is required.

# 25. SPS 382.20(1) - 7/22/05

**Does a pressurized private interceptor main sewer plan need to be submitted for plan review?** Sometimes. If the drainage fixture unit load on the piping would require a gravity flow pipe size of greater than four inches, the plan needs to be submitted to the department or an appropriate agent city.

# 26. SPS 382.20(1) - 11/18/97

Can a municipality require plan review beyond what is required by the plumbing code? An agent municipality can require plan review for fewer than 16 plumbing fixtures. An ordinance is required.

### 27. **SPS 382.20(1) - 11/10/10**

**Bed and Breakfast plumbing review requirements?** Plan review for plumbing installations at a "bed and breakfast" is required when the nu mber of fixtures involved meets the plan review requirements for public buildings (currently 16).

# 28. **SPS 382.20(1) - 6/13/2011**

**Replacement grease interceptor plan review?** Except for direct replacement, all grease interceptor installations require plan review.

# 29. **SPS 382.20(1) - 5/10/07**

May a POWTS designer sign plans for an exterior grease interceptor? No, the state Department of Safety and Professional Services only permits a POWTS designer to design septic tanks for private sewage disposal systems, drain fields designed to serve such septic tanks, sewer service from the septic tank, or sewer extensions from the mains to immediate inside (or proposed inside) of the foundation wall of the building.

# 30. SPS 382.20(1) - 11/24/04

Plan review requirements for multiple dwellings? See Table SPS 382.20-2 which states "For the purposes of plan submittal, public buildings do not include zero-lot line row houses where each living unit is served by an individual water service and an individual building sewer." These individual connections (water and sewer) are to the public sanitary sewer or public water main, or to a private interceptor main sewer and/or private water main. The building may be defined as a row house, apartment, or condominium, but the individual plumbing system requirement must be met. For the interpretation of this section, the private interceptor main sewer and private water main extends to the most upstream

building served. So all buildings are treated identically. Because of their individual connections, each row house is required to have one full-sized drain and vent stack.

# 31. SPS 382.20(1) - 9/25/98

May pre-fab systems be assembled prior to plan approval? Assembled, yes, but not installed. SPS 382.20(1)(a) requires that "Written approval for the plans shall be obtained prior to installation of the work."

#### 32. SPS 382.20(1) - 7/28/03

# When is registration or plan review needed for Cross Connection Control Assemblies?

- 1. Plan review for testable CCC devices is required when the installation is in health care or related facility. For all other installations, registration with IS of testable CCC devices is required.
- 2. When replacing an existing assembly with the exact same model number and size? No, but a note should be sent with the next test report stating it has been changed.
- 3. When replacing an existing assembly with the same ASSE number, but a smaller size? No, not when dealing with non-potable water. A note should still be sent. When dealing with potable water, it is a decision of an IS plumbing plan reviewer through a phone conversation with the submitting party.
- 4. When replacing an existing assembly with the same ASSE number, but a larger size? No, not when dealing with either potable or non-potable water.
- 5. When moving an existing assembly vertically, but on the same floor? No.
- 6. When moving an existing assembly to a different floor? Yes.
- 7. When moving an existing assembly horizontally? A good rule of thumb is to consider a 10-foot diameter area. If the assembly is to be moved ten feet from its original location, then yes. If not, then no. This can be discussed with an IS plumbing plan reviewer.

# 33. **SPS 382.20(1) - 8/10/00**

Can a municipality force a homeowner to connect to public sewer and water? Yes, by ordinance. See statute 281.45.

# 34. SPS 382.20(1) - 5/20/99

Plan submittal/inspection of Native American land? See PDF file.

#### 35. SPS 382.20(1)(b) - 1/4/99

Which private water mains get approval from DSPS or DNR? This <u>PDF file</u> gives different situations describing when a water main will be approved by DNR and which ones will be approved by DSPS or an agent municipality.

# 36. SPS 382.20(1)(b) - 10/4/05

Sometimes. If the pressurized private interceptor main sewer is carrying more than 250 drainage fixture units (a gravity flow pipe serving the same flow would be required to be greater than four inches in diameter), plan review is required. If a gravity flow private interceptor main sewer of more than four inches in diameter discharges into a sump, then the downstream pressurized sewer must be included in the plan submittal.

# 37. SPS 382.20-1 - 6/1/04

Referring to Table 382.20-1, number 2, what type of buildings would be owned by a metropolitan or sanitary sewer district? Basically, this refers to sewage treatment plants. However, if the sanitary sewer district owns other buildings, those buildings would need plumbing plan approval by IS prior to construction.

#### 38. SPS 382.20-2 - 6/1/04

What is a storm private interceptor main sewer? A storm private interceptor main sewer is serving the runoff or piping from two or more buildings. All piping designed to serve as a private interceptor main sewer greater than four inches in diameter (when sized for gravity), including a storm sewer, must be submitted for plan review.

#### 39. SPS 382.20-2 - 6/1/04

Are plumbing plans required to be submitted for a building that contains a single-family dwelling and a commercial establishment? Yes, if the fixture count of the total building includes 16 or more fixtures

# 40. SPS 382.21(2)(a) - 5/10/07

May a cross connection control assembly remain in service if it is not code compliant now, but was code compliant when it was installed? A cross connection control device may remain if it was code compliant at the time of installation unless the cross connection device is failing or is being replaced. See <u>PDF file</u> about dates of when cross connection control devices of various types were code compliant.

### 41. SPS 382.21(3) - 6/6/00

What needs replacement in existing installations? <u>PDF file</u> to help an inspector know what needs to be replaced if found during inspection of an existing installation.

#### 42. **SPS 382.30(1) - 6/01/04**

If showers are installed on pool decks, can the drains serving those showers be considered deck drains or must those drains be sanitary drains? The shower drains used to wash chlorine off pool patrons are considered deck drains unless the showers are provided with soap and are to be used as sanitary washing facilities. If the showers are provided with soap, the drains must discharge to sanitary.

# 43. **SPS 382.30(1) - 6/1/04**

**Are floor drains sanitary fixtures?** Yes, floor drains are sanitary fixtures. SPS Table 382.38-1 designates the discharge points for floor drains. Some floor drains, like those located in well pump houses may discharge to grade.

#### 44. SPS 382.30(3) - 2/5/02

What is the dfu value of a garage catch basin? According to SPS Table 382.30-1, the drainage fixture unit value of a floor drain is four. Since a garage catch basin is a modified floor drain, the dfu value of a garage catch basin is also four, regardless of the number of fixtures or trenches connected to the basin.

### 45. **SPS 382.30(3) - 11/10/10**

Can a refrigerated storage case receptior of indirect waste be smaller than three inches? Yes, an alternate system approval has been issued that allow the receptor to be two - four inches in diameter. The dfu value is two.

#### 46. **SPS 382.30(3) - 7/28/03**

**Is an automatic clothes washer a wall-outlet fixture?** Yes, even if the trap for the fixture drain is installed below the floor, an automatic clothes washer is considered a wall-outlet fixture.

#### 47. SPS 382.30(4) - 7/28/03

Can a municipality dictate the size of a private interceptor main sewer? Yes, a municipality can dictate the size of PIMS. The requirement must be by ordinance.

#### 48. **SPS 382.30(4) - 2/25/04**

Can a laundry tray which is being used as a lavatory serve as the one-dfu fixture for a wet vent? No. If a fixture is sold as a laundry tray, the fixture unit value is two, regardless of usage.

# 49. SPS 382.30(4) - 2/25/04

**Is a laundry tray a service sink for dfu value?** No. A service sink is a specific fixture that is labeled as a service sink by the manufacturer. A customer may use a laundry tray as a service sink, but that doesn't affect the fixture units.

### 50. **SPS 382.30(8) - Date?**

When is a tee a heel-inlet fitting? A tee on its back can meet the radius requirement for a floor outlet water closet discharging to a horizontal line. It is not considered a "heel inlet" fitting, as the manufacturers don't list it as a heel inlet fitting in their catalogues.

# 51. SPS 382.30(11) - 5/29/06

**Does a crawl space need a floor drain if a water heater is installed in the crawl space?** No. The code only requires the drain where a plumbing fixture is located on a "floor" which is entirely below grade. The definition of a floor is an area on which a person stands. Since a crawl space does not meet that definition, a floor drain is not required by code when a water heater is installed in the crawl space. A receptor is still required for the T&P relief valve.

# 52. SPS 382.30(11) - 11/24/04

Is a petition required from Department of Safety and Professional Services if the Department of Natural Resources has issued a variance to a well setback? No, if DNR has issued a variance, a DSPS variance is not required. DSPS staff and agents are required to enforce well setbacks as they are referenced in the code.

# 53. **SPS 382.30(11) - 11/18/97**

Can a municipality dictate the type of saddle fittings? Yes. The requirement must be by ordinance. The saddle is required to be approved by IS for use in Wisconsin. See <a href="SPS 384.30">SPS 384.30</a>.

# 54. SPS 382.31(3) - 11/17/97

Can three one-dfu fixtures discharge upstream of a circuit vent connection? No, the connection of more than two one-dfu fixtures to the circuited vented drain line must be downstream of the circuit vent connection. The wording is "may discharge into a horizontal drain served by a circuit vent." Therefore, only two one-dfu fixtures can be connected to the circuit vent.

### 55. **SPS 382.31(3) - 11/19/97**

**Are air admittance valves approved in Wisconsin?** The approval of specific air admittance valves is included among the product evaluations.

### 56. SPS 382.31(11) - 7/28/03

Can a dishwsher standpipe connect to a horizontal common vent? No, a dishwasher standpipe can not connect to a drain vented by a horizontal common vent. The code language prohibits this connection; "fixture drains from two traps serving a kitchen sink with or without a dishwasher." The traps must serve a kitchen sink for the installation to include the horizontal common vent.

# 57. **SPS 382.31(13) - 11/17/97**

Must a horizontal wet vent - tub/shower and lav - share a drain? Yes, when using a horizontal wet vent, the lavatory and tub or shower must share a common horizontal drain between their connection and the water closet connection.

### 58. **SPS** 382.31(13)(b) - 4/1/08

May only one water closet be included in a horizontal wet vent where there are two lavatories and two bathtubs or showers? Yes. The only limitation of the horizontal wet vent is that more than two water closets may not be included on the vent.

#### 59. SPS 382.31(14) - 07/28/03

What is the dfu load when a relief and circuit vent join? For example, if the relief vent has 24 dfus and the circuit vent has 24 dfus, the load is only 24 dfus when the two connect.

# 60. **SPS 382.31(16) - 6/1/06**

What's required for the vent terminating through an exterior wall to be approved by the IS? For this section, "approved by the department" means being listed in the code for vent terminals and also terminating no less than five feet below a building overhang.

#### 61. **SPS 382.32 - 11/17/97**

**Do material changes require re-submittal of plans?** Sometimes. When the materials are changing to a more restrictive material, like from Type L copper to PEX, a revision will be necessary. If you are replacing type K with type L (and all installation requirements are met), a revision is not be necessary.

# 62. SPS 382.32(3)(a) - 2/25/04

May a garbage disposal be installed on a breakroom sink? Yes. There are no requirements prohibiting the installation of a garbage disposal on a breakroom sink.

# 63. SPS 382.33(1) - 12/23/03

Is an emergency eyewash required to be discharged via indirect waste to the plumbing system? An emergency eyewash may be permitted to directly connect to the sanitary system if the outlets from the water supply system are above the bowl of the eyewash (an air gap is created). For biologically or chemically isolated laboratories, contact IS plumbing staff for more information.

# 64. SPS 382.33(7) - 8/8/01

What is the air gap separation distance in a drain system? The code compliant separation distance is stated in SPS 382.33(7). For piping of one-inch or less in diameter, the air gap is twice the diameter of the indirect waste piping. For piping greater than one inch in diameter the code compliant separation is two inches.

# 65. SPS 382.33(8) - 3/13/98

**How do you size a local waste serving T&P relief valves?** The receptor size dictates the dfu value for sizing the local waste piping. SPS Table 382.30-1 is used for sizing the piping based on the dfu value.

### 66. SPS 382.33(8) - 3/13/98

**Denied petition for lavatory drain tailpiece?** A petition was denied on 7/17/92 for local waste piping serving as a receptor for condensate waste to discharge to a lavatory drain by means of a branch tailpiece. Petitioners statements included that no other place existed to discharge the condensate, that the air conditioner was located about 10 feet from the bathroom area, and that these units are used only two to three months per year. Connecting the condensate to the trap seemed logical because the trap is always being used. The petition was denied because the intent of the code was not met.

# 67. SPS 382.33(8) - 7/28/03

Where is the air-gap when using a funnel receptor? When a funnel is used in connection with a floor drain grate, the air-gap for the indirect waste is measured as the distance between the end of the direct waste pipe and the rim of the funnel.

# 68. **SPS 382.33(8) - 7/28/03**

May an ice machine discharge into a branch tailpiece? A branch tailpiece serving a sink is not an approved receptor for the discharge from an ice machine. A petition for variance was approved for the installation. See attached.

### 69. SPS 382.33(9) - 4/9/04

**Is a floor drain required in an elevator pit?** The Wisconsin plumbing code does not require the installation of a drain in the elevator pit, but the ASME standard A17.1-96 does. The requirement for the drain can be found in Rule 106.1b(3).

### 70. SPS 382.33(9) - 7/28/03

**Must an eye wash discharge to sanitary?** No. An emergency eye wash may discharge to the sanitary drain system or the chemical waste system. If the eye wash discharges to the chemical system, it need not be considered for sizing the dilution or neutralizing basin. See 382.33(1), dated 12/23/03, for more information.

# 71. SPS 382.33(9) - 2/27/01

**Does the drain receiving elevator drain discharge require a vent?** No. The elevator drain discharge is considered stormwater. Only clearwater interior drains require venting.

# 72. SPS 382.33(9)(g) - 10/4/05

Must a sink in a refrigerated food storage room discharge through an indirect waste to the drainage system? Yes. The code states that "Drains serving refrigerated food storage rooms, compartments or display cases shall discharge to the sanitary drain system through indirect waste piping."

#### 73. SPS 82.32(4)(b) - 6/1/06

**Is a pedestal pedicure spa considered a pedestal fixture?** Yes. A pedestal pedicure spa may be installed in accordance with the pedestal fixture requirement for vertical distance from the fixture outlet to the trap.

#### 74. SPS 382.33(9)(c)1 - 6/1/06

May a 1.5-inch receptor for a residential clothes washer be increased in diameter above the trap inlet in order to terminate less than 32 inches above the floor? No. The entire standpipe must be two inches in

diameter in order for the receptor to terminate less than 32 inches above the floor. A two-inch diameter standpipe that terminates between 26 inches and 48 inches above the floor must have a two-inch trap and fixture drain installed downstream of the standpipe.

# 75. **SPS 382.34(4) - 4/2/04**

May a single trench drain be installed to serve several rooms? No. Trench drains (or any other type of fixture) must be located so that the fixture is easily accessible for cleaning, meets the trap-compartment requirements, and complies with the basic plumbing requirements. Since trench drains are required to connect individually to the catch basin with a return bend, unless they're designed as floor drains with individual traps, IS considers it hazardous to run trenches through walls.

# 76. SPS 382.34(5) - 7/28/03

Are there circumstances where grease interceptors do not need to be installed? Under conditions where grease will not be significantly generated, the department may allow a designer to install fixtures without a grease interceptor. See the <u>attached</u> letter for an example.

# 77. SPS 382.34(5) - 4/4/01

What are plumbing requirements for bed and breakfast kitchen wastewater? Less than nine rooms are considered to produce insignificant grease and are not be required to discharge kitchen wastes through a grease interceptor. A kitchen in a B&B with more than nine rooms will need installation of a grease interceptor.

# 78. **SPS 382.34(5) - 6/29/01**

**Is a grease interceptor required for an "auto fry"?** An "auto fry" is defined as an enclosed, ventless, self-contained individual-serving deep fryer. A grease interceptor is not required where only one auto fry is installed.

# 79. **SPS 382.34(5) - 7/30/01**

# Where are grease interceptors required?

Day Care: Licensed for more than nine children.

*Restaurants:* Only exception is when food is served on paper plates and spatula is only utensil for frying food.

*Elderly housing:* Main kitchen. Community room if more than one-compartment sink is installed.

Church: Two compartment sink or larger.

Fire Stations: Nine or more station employees requires grease interceptor.

*Break rooms:* When more than 2 compartment sink is installed and more than a stove and dishwasher.

Camp: Same as church. More than two compartment requires interceptor.

CBRF: 9 or more residents requires interceptor.

Town Hall: Two or more compartments requires grease interceptor.

Fast food: Pizza machine = No, hot dog machine = No, Meat slicer = Yes, Presliced meats = No,

Meatball, chicken bar-b-que, soups = Yes.

*Grocery store meat department:* Requires interceptor.

Bakery: requires grease interceptor.

*Schools:* Home Economics room=No. Main kitchen = Yes.

Prison: Same as school.

Custard, ice cream stand: No grease interceptor required for only ice cream or custard.

### 80. SPS 382.34(5)(a) - 8-10-2011

Is a grease interceptor required to be installed for a warming kitchen? In an effort to provide a less institutional atmosphere, many facilities licensed as nursing homes or community based residential facilities (CBRF) are providing common kitchen facilities for resident/patient use. The warming kitchen is typically equipped with a residential style kitchen sink (with or without a garbage grinder) and dishwasher, stove, and refrigerator. The intended usage is for the residents to have access to personal kitchen use between or after meals served by the main kitchen facility. No, "warming kitchen" plumbing fixtures are not required to discharge to a grease interceptor as long as all food preparation, cooking, and clean up for the meals provided by the nursing home or CBRF are performed at the main kitchen facility.

# 81. SPS 382.34(8) - 11/24/04

Can the runoff from an area under a fueling canopy be discharged to the sanitary sewer if the remainder of the site is discharged to the storm? Yes, however an oil and flammable liquids separator is required to serve the discharge from under the canopy.

# 82. SPS 382.34(11) - 11/24/04

Is a variance required for a meat processing plant discharge to bypass an interceptor if the state Department of Natural Resources has issued a Wastewater Pollutant Discharge Elimination Sysytem permit to land spread waste including the blood and other byproducts? No. Since the code states the reason for the requirement, i.e. "to prevent the discharge of feathers, entrails, blood and other materials" and the waste is not being "discharged," but is being collected and land spread, a variance would not be required in this instance.

# 83. SPS 382.35(3) - 7/22/05

Can the opening created by removing a water closet serve as a cleanout for a branch on two floor levels? Yes, the water closet opening can serve as a cleanout for the branch until the branch connects with another branch to create a main.

# 84. SPS 382.35(3) - 7/22/05

Are cleanouts required to serve pump discharge or pressurized sewer piping? No. Cleanouts are not required. See Comm 82.35(1).

### 85. **SPS 382.35(3) - 11/18/97**

Can a municipality require sampling manholes? Yes, a municipality can require installation of sampling manholes. The requirement must be by ordinance.

# 86. SPS 382.35(3) - 6/6/00

Are the risers included in the measurements between cleanouts on building sewers and drainage piping inside a building? No. The measurements are taken horizontally between cleanouts.

#### 87. SPS 382.35(3) - 6/6/00

Where are cleanouts required on circuit vented lines? These <u>PDF file</u> drawings show the required installation of cleanouts on circuit vented lines.

### 88. SPS 382.35(3) - 6/6/00

When is a manhole a cleanout? Terminology can be confusing as to when a manhole, catch basin, area drain inlet, etc can be used as a cleanout. These <u>PDF file</u> drawings will help evaluate an installation.

### 89. SPS 382.35(3) - 6/6/00

Can a water closet be used as a cleanout at the junction of the building drain and building sewer? No. The only cleanout requirement where a removable fixture trap can replace a cleanout is the "branches" requirement.

# 90. SPS 382.35(3) - 11/19/02

**Is a manhole required for a vertical change of direction?** No. The code's intent is to have the manhole and cleanout requirements for sewers and private interceptor main sewers apply to horizontal changes in direction, not changes in elevation. This applies to the requirements in SPS 382.35 where cleanouts, manholes, or storm inlets are required for changes in direction of 45 degrees or more and also where the code requires for a manhole where there is a change of direction.

#### 91. SPS 382.35(3)d - 2/6/07

May a cleanout for a private interceptor main sewer be located inside one of the buildings? No, the cleanout for a private interceptor main sewer is required to be an exterior cleanout.

# 92. SPS 382.36(3) and SPS 360.30 8/7/07

What does the department require for the thickness of a subsurface stormwater detention system or detention basin liner?

There are three options acceptable for a subsurface stormwater dentention system or detention basin liner:

- 1. Clay liner
- 2. High Density Polyethylene Liner (HDPE)
- 3. Polyethylene Pond Liner (PPL)

The specifications for the liners are here, PDF file.

# 93. **SPS 382.36(6)(c) - 3/1/05**

In previous versions of the code, a reduction in size in the direction of flow was permitted only within a manhole. Does the current code have such a requirement? Yes. SPS 382.36(6)(c)1 requires that fittings and connections comply with SPS 382.30(8) and (9). (9) only allows any additional obstruction of flow where that reduction is in a storm system within a manhole.

# 94. SPS 382.36(8) - 3/16/04

If a foundation drain and accompanying sump pit are installed, must the pump also be installed at that time? There are two conditions that require the pump to be installed at the time the foundation drain and sump is installed: 1. Natural conditions that would create a need for the pump and, 2. A municipality that requires the installation of a pump at the time of sump installation. See the Uniform Dwelling Code, SPS 321-325, for more information.

# 95. **SPS 382.36(13) - 7/22/05**

What does a stormwater system operation and maintenance (O&M) plan look like? No two O&M plans are identical; plans are specific to the installation. One typical statement contained in an O&M plan

might be that inlets should be inspected twice a year and debris removed. Another might say, no standing water should be permitted in the system to prevent mosquito larvae habitat. Any defects in the pavement or grass areas that allow standing water for more than 48 hours will be repaired.

# 96. **SPS 382.38 - 6/1/06**

Where may decorative fountain drains and fountain overflow drains discharge? Decorative fountain drains may discharge to the storm system. They may also discharge to grade where no nuisance is created, and where not prohibited by local government or the Department of Natural Resources. Fountains located inside buildings may also discharge to the sanitary system if the discharge does not exceed 50 gallons per day.

# 97. **SPS 382.38 - 11/19/97**

Should religous water fixtures discharge to surface or drain subsurface? Most fixtures and wastewater discharge points are listed in SPS Table 382.38. Holy water uses are not listed and the department allows discharge of holy water via piping systems to grade, subsurface, sanitary systems, or storm drains.

#### 98. **SPS 382.38 - 8/06/03**

Where can greenhouse wastewater discharge? Decisions about greenhouse wastewater discharge to storm or sanitary are made by the state Department of Natural Resources. Interior clearwater piping shall be trapped, vented, and installed by a licensed individual.

#### 99. SPS 382.38 - 11/24/00

Where should a Zambonie discharge? An ice rink surfacing machine may discharge to either storm or sanitary. If ice is to be melted and discharged through the interceptor, then the discharge is to storm. If the catch basin is to be used for other purposes, the discharge should be to sanitary.

# 100. SPS 382.38-1 - 6/1/04

SPS 382.38-1. 8 allows a municipal well pump house floor drain and sink to discharge to grade, unless prohibited by local municipality and where no nuisance is created. Would an emergency shower in this facility and a chlorine storage floor drain in this facility also be allowed to discharge to grade? Yes. The fixtures may also discharge to grade.

#### 101. SPS 382.38(3) - 12/23/03

What are the allowable discharge points for a loading dock? A loading dock is treated as a parking lot. Enclosed loading dock discharge points comply with SPS Table 382.38-1 #6. Open loading dock discharge is considered stormwater and would be discharged as permitted in SP Table 382.38-1 #11.

# 102. SPS 382.38(3) - 12/23/03

What's the definition of an "open parking lot"? The plumbing code uses the building code definition of "open" for parking lots. See the Wisconsin Commercial Building Code, SPS 360-366.

# 103. SPS 382.38(3) - 4/1/08

Where can the fire test and draindown from a standpipe discharge? Water discharged during a fire test is considered clear water unless there are chemical additives and it may discharge as SPS Table 382.38-1

allows, including a private onsite wastewater treatment system that's designed to receive the discharge, municipal sanitary sewer, municipal storm sewer, ground surface (unless prohibited locally and when no nuisance is created) or subsurface dispersal (which would require plan review and approval for a commercial building).

### 104. SPS 382.40(3) - 02/5/02

**Is tempered water required for emergency fixtures?** No, tempered water for emergency fixtures is not required by the plumbing code. A federal Occupational and Health Administration consultant may require the installation of tempered water because the standard for emergency fixtures refers to tempered water.

# 105. SPS 382.40(4) - 11/19/97

Requirement for building control valves. See diagram <u>attached</u>. There must be one building control valve that is located within three feet from the point where the water service enters the interior building (either where it penetrates the floor or wall).

#### 106. **SPS 382.40(5) - 5/10/07**

When are water heaters required to be set at 125 degrees? Manufacturers are required, by statute, to be set water heaters at 125 degrees Fahrenheit when they are sold for individual use in a dwelling unit in Wisconsin. See 134.81, Stats. Landlords who rent for residential tenancy must set the thermostat of the water heater that serves that individual tenancy at 125 degrees or at the minimum setting of the water heater. See 704.06, Stats. A landlord of premises which are subject to residential tenancy and served by a water heater serving only that premises shall set the thermostat of that water heater at no higher than 125 degrees Fahrenheit before any new tenant occupies that premises or at the minimum setting of that water heater if the minimum setting is higher than 125 degrees Fahrenheit. There are no requirements for residential water heater temperatures in the plumbing code.

### 107. SPS 382.40(5) - 5/29/06

Can a temperature and pressure relief valve discharge to a floor that doesn't have a floor drain? An approved receptor is be required if there is no floor drain.

### 108. **SPS 382.40(5) - 5/29/06**

Does replacement of an existing water heater require the installer to update the receptor for the temperature and pressure relief valve to current code compliance? No, not unless a health hazard is created by leaving the existing installation

#### 109. **SPS 382.40(5) - 11/17/97**

What pressure rating is required for a temperature and pressure relief valve? The T&P relief valve pressure rating may not be higher than the tank working pressure rating.

# 110. SPS 382.40(5) - 8/06/03

Can the piping from a temperature and pressure relief valve serving a water heater in a maufactured home continue to discharge through the floor of a structure when a water heater is replaced? Yes, as long as the replacement installation mirrors the original installation.

# 111. SPS 382.40(5) - 12/11/98

How are drain pans used as temperature and prssure valve receptors installed? Pans placed under water heaters in case of drips are not considered plumbing and should not be connected to the plumbing system. If a water heater T&P relief valve discharges into this pan, it is now considered a receptor and installed accordingly.

# 112. SPS 382.40(5) - 5/2/00

Is insulation required by the plumbing code for all domestic hot water recirculation systems? No, the plumbing code only requires insulation where the piping conveys "circulated water," which is water continuously moving through the piping system, and where the piping is equipped with a self-regulating electric heating cable.

# 113. **SPS 382.40(7) - 11/17/97**

Can a water supply system to a mobile home park exceed eight feet per second? Yes, the code doesn't restrict velocity in a supply system except in the water distribution system. (Be aware of manufacturer's requirements.)

# 114. SPS 382.40(7) - 11/19/97

Is the demand for a turf sprinkler required to be included on the water calc worksheet? No.

# 115. SPS 382.40(7) - 9/1/00

What needs to be added to demand to size a multipurpose piping system? On a single-family dwelling, nothing. On a duplex, five gpm to the service. Calculations should be done according to both NFPA 13D and per SPS 382.40(7). Whichever causes the larger piping system is the controlling water sizing.

# 116. SPS 382.40(7) - 9/1/00

What gallons per minute are required for emergency fixtures? Unless further information is provided by the designer of the system, the following gpm rates should be applied to sizing calculations: Eye wash - .4 gpm, Face wash - 3 gpm; Drench hose - 3 gpm; Drench shower - 20 gpm.

# 117. SPS 382.40(7) - 4/4/01

What are the water supply fixture units that can be calculated when designing a water distribution system using tempering valves? The total water supply fixture units for a fixture are used in the calculations downstream and upstream of the tempering valve.

# 118. **SPS 382.40**(7) - 1/2/03

What pressure is required for emergency fixtures? An emergency fixture requires 30 psig. This minimum pressure is used in the water calculation worksheet if an emergency fixture is included in the water distribution system.

# 119. SPS 382.40(7) - 1/2/03

What flow is required for combination emergency fixtures? The demand for each of the units in a combination emergency fixture unit must be combined in the water sizing for a distribution system that includes, for example, an eye wash and an emergency shower. The eye wash demand is .4 gpm and the

shower demand is 20 gpm, so the combination fixture has a demand of 20.4 gpm.

# 120. SPS 382.40(7) - 2/5/02

How many emergency fixtures must be included in the water sizing? If there are multiple emergency fixtures located in building or facility, the designer and owner must make the decision as to how many emergency fixtures could be used simultaneously. The water sizing should be based on that decision. The plumbing review includes at least one emergency fixture in the gallons per minute demand of the system.

# 121. SPS 382.40(7) - 2/5/02

May fire residual pressure be used for water system sizing? No. The plumbing code requires that the minimum pressure in the street be used for water distribution sizing calculations. In most cases, a municipality will provide a static pressure and a normal residual operating pressure. The normal residual pressure is the pressure that is appropriate to use in the water distribution sizing.

# 122. SPS 382.40(8) - 11/17/97

Can an integral bypass serve a softener or iron filter? Yes. However, the filter or softener must be able to be removed for service and with the valve remaining on the system.

# 123. **SPS 382.40(8) - 4/20/98**

When does a replacement wall hydrant need to meet code? When replacing a hose bibb, it's only necessary to bring the replacement to the requirements in SPS 382.40(8)(a) when cutting the pipe or disconnecting the hydrant inside the building. Cross connection control is required to be applied to the hose connection.

# 124. SPS 382.41 - 5/10/07

What backflow protection is needed for pressure washers (without break tanks including air gaps)? Pressure washers may be hard piped or connected with a garden hose to the water supply system. ALL pressure washers installed permanently must be connected to the water distribution system with approved water distribution materials (see SPS 384.30).

Minimum acceptable backflow protection:

- Portable Pressure Washer: Hose connection vacuum breaker or backflow preventer (ASSE 1011 or 1052) connected to hose bibb serving washer. (Non-continuous use, not permanently connected to the water supply.)
- Permanently installed pressure washer: RP (ASSE 1013) installed in water supply.

### 125. SPS 382.41 5/10/07

What backflow protection is needed for booster pumps? Booster pumps are generally hard piped to the water supply and then use a hose at the outlet end of the pump. ALL booster pumps installed permanently must be connected to the water distribution system with approved water distribution materials (see SPS 384.30). Booster pumps must be provided with an automatic low pressure cut-off switch to protect the booster pump in the case of loss of supply pressure when the booster pump is serving plumbing fixtures, appliances or pieces of equipment. All booster pump installations must take into account the pump's affect on the plumbing water distribution system.

Backflow protection options for booster pump installations:

Inlet side of booster pump (continuous use): RP (ASSE 1013) installed in water supply.

Outlet side of booster pump: Greater than 150 to 350 psig. RP (ASSE 1013) installed in the water

distribution system downstream of the pump. In this case the pump materials in contact with the water must be water distribution approved materials.

- Greater than 350 psig: There are no backflow preventers manufactured to withstand these pressures.

# 126. SPS 382.41 - 11/19/09

Are there requirements for installing the "Strahman" steam/water mixing valves? Yes, see PDF file.

# 127. SPS 382.41(3) - 4/1/08

What are the cross connection control requirements for an emergency eye wash located on a hose? If the emergency eye wash can be submerged in a sink, a low-hazard cross connection control device would be required to serve the eye wash. If the emergency eye wash is located where it is not likely to be submerged in wastewater, then no cross connection control device is required.

# 128. SPS 382.41(3) - 11/24/04

When does cross connection control need to be modified to be code compliant when remodeling or repairing a plumbing system? If the piping system is being cut to remove or repair the backflow prevention device or assembly, the cross connection control must be made code compliant to the code in effect at the time of the repair. If a union is installed that would allow removal of the device or assembly without cutting the piping system, the existing device or assembly may be returned to service.

# 129. SPS 382.41(3) - 3/2/99

How is cross connection control installed on a carbonator? See PDF file illustration.

# 130. SPS 382.41(3) - 5/2/00

Can a chiller water supply also serve fire protection? Yes. However, backflow protection must be installed to serve the degree of hazard that is caused by the installation.

# 131. SPS 382.41(3) - 8/1/00

Can a whirlpool and a pool be served by a single rp valve? No, each pool, wading pool or whirlpool must be served by separate reduced pressure backflow prevention valves or air gaps. A pool may be filled by a hydrant that has a hose connection backflow preventer attached.

#### 132. SPS 382.41(3) - 8/06/03

What backflow protection is required on a dental mold grinder? The dental mold grinder requires either an internal air gap in the device or a device that provides protection in accordance with SPS Tables 382.41-1 and 382.41.2.

# 133. **SPS 382.41(3) - 5/15/01**

**Do all fixtures in a mortuary need separate cross connection control?** Yes. The Wisconsin Department of Safety and Professional Services requires that all fixtures be installed in mortuaries with individual cross connection control. Examples are embalming machines and aspirators.

# 134. SPS 382.41(3) - 10/19/0

Can a city adopt an ordinance that requires containment in buildings other than those described in SPS 382.41(3)(c), for example, sewerage treatment facilities or marinas, wharves and docks? No. There are no

provisions in the code or statutes that would permit local ordinances that supercede the uniform plumbing code requirements for containment. Statute 145.02(2) states that "The department shall have general supervision of all such plumbing and shall after public hearing prescribe, publish and enforce reasonable standards therefore which shall be uniform and of statewide concern so far as practicable." In several cases the plumbing code has specific allowances for cities to adopt ordinances or enforce requirements in excess of the plumbing code. SPS 382.41(3) has no such permission.

# 135. **SPS 382.41(3) - 5/2/00**

Have there been special specific circumstances permitted monitoring of a water supply in lieu of cross connection control? Yes, see conditions noted on letter, PDF file.

# 136. SPS 382.41(3) - 8/8/01

Can a fire truck fill be located in a fire protection system? Yes. A fire truck-fill in a fire department may be part of a fire protection system. The backflow protection assigned to the sprinkler system will be considered adequate for the fire truck fill.

# 137. SPS 382.41(3) - 1/2/03

**Is a non-reservoir type hydrant permitted?** Yes, it is permitted for existing installations. Hydrants will not be required to be removed if the water supply to the hydrant is protected with a cross connection control device such as an ASSE 1012 and a hose connection vacuum breaker. New installations require the installation of a reservoir type hydrant.

### 138. **SPS 382.41(3) - 1/2/03**

**Does a pipe that travels through a fountain require a cross connection control device?** A water supply that travels through a contaminated area is not automatically required to have a cross connection control device installed to serve that distribution line, if the termination of the water supply is above the flood level rim of the fountain and if the water distribution material is resistant to corrosion. See SPS 384.30(4).

# 139. SPS 382.41(3)(c) - 2/25/04

Is it code-compliant for one cross connection control device or assembly to serve multiple humidifiers? No. However, an air gap within a humidifier may provide adequate backflow protection.

#### 140. **SPS 382.41(4)(a) - 6/1/06**

May a small diameter tube from a chemical dispenser be inserted into a flush valve tube so as that the end of the small tube would be the highest point of injection or aspiration? No. The point of penetration into the flush valve tube is considered the point of aspiration.

# 141. SPS 382.41(4) - 7/22/05

At what level must a pipe applied atmospheric vacuum breaker be installed when an aspiration device is located downstream of the vacuum breaker? The pipe applied atmospheric vacuum breaker must be installed so that the critical level indicator is at least six inches above the connection of the aspiration or injection device.

# 142. SPS 382.41(4) - 10/23/98

Is an atmospheric vacuum breakers required above a urinal? An atmospheric vacuum breaker is required

to be installed on water distribution serving urinals. The minimum height of the atmospheric vacuum breaker is six inches above the flood level rim of the urinal bowl (for wall mount) and the floor level (for stall type). Where chemicals are being aspirated into the urinal fixture supply, the vacuum breaker must be located at least six inches above the point of aspiration.

### 143. **SPS 382.41(5)(h) - 2/25/04**

What kind of "wild head" is permitted downstream of an atmospheric vacuum breaker serving a turf sprinkler system? The wild head must be sold as a turf sprinkler or a hole may be drilled in a pipe to serve as a wild head when the orifice is as large as a turf sprinkler orifice. The sprinkler may not include an automatic shut off.

# 144. SPS 382.50 - 6/1/04

**Are there requirements beyond SPS 382.50 for laboratories?** Yes, there are other requirements for laboratories. See the federal Center for Disease Control Web site for more information.

# 145. SPS 382.50(2) - 7/10/2006

May psychiatric units have faucets installed that are equipped with spouts and actions other than those listed in SPS 382.50(2) or Table 382.50-1? Yes, there are other options for environmental suicide prevention approved via an alternate approval, PDF file.

### 146. SPS 382.50(3) - 11/14/03

Article about hot water distribution systems in health care.

#### 147. SPS 382.50(3)(b)8. 12/12/14

May an aquastat control on a domestic hot water heating device satisfy the requirements of SPS 382.50(3)(b)8? No. The intent of this code section is to prevent injury to patients from scalding hot water. The code section specifies that the distribution system be designed so as to prevent water at an outlet in excess of 1800 F, not the device or appliance. Controls regulating a burner or automatic valve may deactivate the heating source, but will not prevent water in excess of 1800F from entering the water distribution system. A device is required on the distribution piping that will prevent the excess hot water. As an example, the code appendix illustrates the use of a fail-safe solenoid valve on the hot water distribution piping.

# 148. **SPS 382.50(12) - 11/19/02**

**Is a five-inch spout height required for public lavatories?** No. The public restroom may have standard lavatory faucets. Only those faucets listed in SPS Table 382.50-1 that require the gooseneck spouts must have the five-inch clearance.

# 149. **SPS 382.60(2) - 4/26/02**

What are the requirements for no-hub hangers? No-hub pipe needs to be supported within 24 inches on each side of a joint unless there's an alignment retaining shield. An alignment retaining shield includes a no-hub coupling. Otherwise, cast iron pipe needs to be supported every length of pipe, horizontally, and every 15 feet vertically. There may be other manufacturer's specifications to follow.

# 150. SPS 82.730(3) - 2/25/04

Does a laundry reuse plumbing treatment system need to comply with Table 382.70? Yes, the

recycled water serving the laundry must comply with Table 382.70. This does not apply to residential suds savers, as a suds saver is not a plumbing treatment system.

# 151. SPS 384.10(1) - 10/4/05

May air admittance valves be installed to serve chemical waste systems? No. If chemical resistant piping is installed to serve a fixture, an air admittance valve is not permitted as a vent termination.

# 152. SPS 384.10(2) - 4/1/08

How would a health care treatment device that includes a reuse system be classified for the purposes of product or plan review requirements? Devices or systems that incorporate hydrotherapy for health care and a water reuse system are classified as health care plumbing appliances. All health care plumbing appliances are required to be submitted for product approval as listed in Comm Table 84.10.

# 153. **SPS 384.11 7/2/07**

Are all chemical dispensing systems required to be listed by an acceptable listing agency as meeting ASSE Standard 1055 or receive a written product approval from Dept. of Commerce? No. There are currently four ways to determine if a specific chemical dispensing system can be installed in Wisconsin.

- 1) It meets ASSE Standard 1055(1)
- 2) It has received written alternate product approval from the department, or
- 3) It has received written alternate system approval from the department.
- Note (1) ASSE Standard 1055 only applies to those devices classified as chemical dispensing systems having self-contained means of backflow protection.
- 4) The chemical dispensing sytem is located downstream of approved backflow protection.

Since there are many chemical dispensing systems that do not have a self-contained means of backflow protection, IS decided to require that type of chemical dispensing system to receive an alternate plumbing product approval in accordance with Comm. 84.11 and Comm. Table 82.41-2.

IS has issued an Alternate Plumbing System Approval regarding chemical dispensing systems that are not covered by ASSE Standard 1055.

Stipulation #1 – Chemical dispensing systems that are not in compliant with ASSE Standard 1055, may be installed when the installation includes an acceptable cross connection method or assembly in accordance with Comm. 82.41 (3) Table 82.41-1 of the Wisconsin Administrative Code.

Stipulation #2 - The installation of the cross connection method or assembly must comply with s. Comm. 82.41 (5) of the Wisconsin Administrative Code.

# 154. SPS 384.30(4) - 11/18/97

Can a municipality dictate materials upstream of a lot line? Yes. The requirement must be by ordinance. IS must review the ordinance.

#### 155. **SPS 384.30(4) - 6/6/00**

Is piping in a marina water distribution or service? The materials downstream of an reduced pressure backflow prevention valve are water service materials. The velocity would not be required to be maintained at eight feet per second. Where the installation is downstream of a building control valve, the code requires water distribution materials.

#### 156. **SPS 384.30(4) - 8/8/00**

Do pipe repair kits need product approval? No. See PDF file letter on the requirements they must meet.

# 157. SPS 384.30(4)(e)3 - 10/4/05

May a lavatory be served by a distribution system of materials listed in SPS Table 384.30-11? No, not unless the materials are listed in 384.30-8 or have received an alternate approval. SPS 384.20(3)(a)2 allows lavatory faucets to discharge up to three gallons per minute, and materials listed in SPS Table 384.30-11 are restricted to fixture outlets of one gpm. or less.

# 158. **SPS 384.30(5) - 6/9/99**

When can someone use pipe saddles? See PDF file document.

# 159. **SPS 384.30(5)(d) - 5/10/05**

Can someone use pipe saddles other than as specified in SPS 84.30(5)(d)? When an installation is proposed for using pipe saddles for above ground drain or vent pipe and tubing, the following conditions must be met:

- Pipe saddles shall be installed in accordance with the instructions of the saddle manufacturer.
- A saddle for drain piping shall have a radius in accordance with Comm 82.30(8)(a).
- The material of the saddle shall be compatible with the materials of the pipes that are to be connected to the saddle.
- The hole in the pipe, which is to receive the saddle, shall be drilled or cored to match the saddle outlet.
- The manufacturer of the saddle shall provide straps or clamps, which wrap around the pipe and saddle.
- Proper hangers or bedding shall be provided to maintain alignment between the opening in the **pipe** and the saddle.
- A saddle used in a pressurized piping system shall meet the applicable code requirements for temperature and pressure ratings.

**END of ORIGINAL**